

**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
COOPERATIVE AGREEMENT**

1. TO: *Recipient*

2. COOPERATIVE AGREEMENT NO.:

3. SUPPLEMENT NO.:

4. EFFECTIVE DATE:

5. EXPIRATION DATE:

6. **FOR RESEARCH ENTITLED** Feasibility Assessment Related to the
Development of Low Cost Derivatives of Existing Satellites for Earth Observing
Missions

7. AWARD HISTORY
PREVIOUS AMOUNT:
THIS ACTION:
TOTAL TO DATE

FUNDING HISTORY
PREVIOUS OBLIGATION:
THIS ACTION:
TOTAL TO DATE:

8. NASA PROCUREMENT REQUEST NO.:

PPC: BR

B/NC: 308

9. POINTS OF CONTACT

Project Manger:

Contracting Officer:

Arlene F. Peterson

Linda S. Kelley

10. PAYMENT:

UNITED STATES OF AMERICA

RECIPIENT

CONTRACTING OFFICER

DATE: _____

DATE: _____

COOPERATIVE AGREEMENT BETWEEN NASA AND INDUSTRY

1. Purpose

The purpose of this cooperative agreement is to conduct a shared resource feasibility assessment to gather information related to the development of low cost, derivative satellites which may be applicable to future Earth observing missions. While the information gathered may be used in future evaluations of alternatives for some NASA missions, this study is not a part of a procurement resulting from a decision to restructure any ongoing mission.

This cooperative agreement will establish a synergistic research team to participate in developing inputs to help establish the viability of developing a satellite system capable of carrying scientific instruments in the range of 200Kg to 500Kg, based on the recipient's flight system. The research team will conduct a study to accomplish the following:

- Develop a spacecraft concept which could dramatically reduces the cost of satellites which meet the exacting performance requirements of Earth observing scientific instruments;
- Using the EOS Chemistry mission instrument suite as a “strawman”, examine cost driving performance and interface requirements for breakpoints in the cost/performance trade space;
- Project the following life cycle cost elements: Design Modification, Manufacture, Assembly, Observatory Integration and Test, Launch Support, and On-Orbit Initialization;
- Consider methods of reducing operations costs; and
- Assess the feasibility of holding costs to less than \$30M per spacecraft.

The study team will produce a Spacecraft System Definition Review at approximately 60 days into the study. At approximately 90 days, the Recipient will host a final briefing which provides the Spacecraft System Definition, Cost, and Schedule details.

2. Authority

This is a cooperative agreement as defined in 31 U.S.C. 6305 (the Chiles Act) and is entered into pursuant to the authority of 42 U.S.C. 2451, et seq. (the Space Act).

3. Responsibilities

This cooperative agreement will include substantial NASA participation during performance of the effort. NASA and the Recipient agree to the following Responsibilities, and will exert all reasonable efforts to fulfill the responsibilities stated below.

a. NASA shall be responsible for --

- Providing the design details of the suite of instruments contained in the Chemistry mission as a basis for the investigation
- Hosting a workshop/ symposium to alert recipients to NASA-developed technology and discuss the unique characteristics of Earth observing missions, currently anticipated to be held during the week of August 12, 1996
- Chairing and participating in the Spacecraft System Definition Review held during the week of September 30, 1996

b. The Recipient shall be responsible for --

- Performing as set forth in the **TBD** technical proposal dated **TBD** *[this will be further clarified after receipt of proposal]*.
- Participating with NASA in conducting the Spacecraft System Definition Review and hosting the Final Review
- Resolving any import/export issues which may arise during the period of this cooperative agreement.

4. Resource Sharing Requirements

Resources provided by NASA to the Recipient under this agreement are required to be matched by the Recipient, in cash and/or in-kind, on at least a 50/50 basis. Criteria and procedures for the allowability and allocability of cash and in-kind contributions shall be governed by Section 23, "Cost Sharing and Matching," of OMB Circular A-110. The "applicable federal cost principles" cited in OMB Circular A-110 are FAR Part 31, entitled "Contract Cost Principles and Procedures."

The Recipient's share shall not be charged to the Government under this agreement or under any other contract, grant, or cooperative agreement, except that the recipient's contribution may be considered as allowable IR&D costs pursuant to NFS 18-31.205-18 (59 Fed. Reg. 22521, May 2, 1994).

5. New Technology (July 1995)

The Recipient shall comply with the "New Technology" clause as stated in NASA FAR Supplement clause 1852.227-70.

6. Designation of New Technology Representative and Patent Representative

(a) For purposes of administration of the clause of this agreement entitled "New Technology", the following named representatives are hereby designated by the Contracting Officer to administer such clause:

Title	Office Code	Address
New Technology Representative	702	NASA/GSFC Greenbelt, MD 20771
Patent Representative	204	NASA/GSFC Greenbelt, MD 20771

(b) Reports of reportable items, and disclosure of subject inventions, interim reports, final reports, utilization reports, and other reports required by the clause, as well as any correspondence with respect to such matters, should be directed to the New Technology Representative unless transmitted in response to correspondence or request from the Patent Representative. Inquiries or requests regarding disposition of rights, election of rights, or related matters should be directed to the Patent Representative. The respective responsibilities and authorities of the above-named representatives are set forth in 1827.375-3 of the NASA FAR Supplement.

7. Data Rights

NASA intends to protect the recipients rights to data both developed at its own expense prior to this study and to data that was developed in the course of this study. No data transfer or "cross fertilization" of concepts will be performed by NASA participants, should two or more cooperative agreements be awarded. The results developed under this program will be made available to senior management for planning of potential future missions. However, NASA also recognizes the potential sensitivity of this data with respect to future procurements. As such, while GSFC will require that the data generated by the

recipients be delivered without restriction for dissemination to employees of NASA, of the Jet Propulsion Laboratory (JPL), and of appropriate support contractor personnel, this data will be protected. All support contractor personnel receiving access to the data generated as a part of these studies will be required to execute non-disclosure agreements. The support contracts involved will be required to contain provisions pertaining to the handling of data and organizational conflicts of interest.

8. Non-U.S. Access to Technology

The performance of this effort may require access to critical technical data, dissemination of which is controlled by the Export Control Act and other U.S. laws and regulations. The recipient must agree and comply with the requirements regarding access and dissemination of such technical data.

Research findings and technology developments which result from research conducted under this cooperative agreement may constitute a significant enhancement to the national defense, and to the economic vitality of the U.S. Accordingly, access to important research findings and technology developments must be controlled in accordance with applicable laws and regulations, including the provisions of the DOD Industrial Security Regulation (DoD 5220.22R) and the Department of Commerce Export Regulation (15CFR 370 et seq.).

9. Term of this Agreement

This agreement commences on the effective date indicated on the attached cover sheet and continues for three months. If all resources are expended prior to the duration, the parties have no obligation to continue performance and may elect to cease at that point. The parties may extend the expiration date if additional time is required to complete the milestones at no increase in Government resources. Provisions of this Agreement, which, by their express terms or by necessary implication, apply for periods of time other than that specified as the agreement term, shall remain in effect, notwithstanding expiration of the term of the agreement.

10. Disputes

The parties to this agreement shall communicate with one another in good faith and in a timely and cooperative manner when raising issues under this provision.

Any dispute, which for the purposes of this clause includes any disagreement or claim, between NASA and the recipient concerning questions of fact or law

arising from or in connection with this agreement and whether or not involving alleged breach of this agreement, may be raised only under this provision.

Whenever a dispute arises, the parties shall attempt to resolve the issues involved by discussion and mutual agreement as soon as practicable. In no event shall a dispute which arose more than three (3) months prior to the notification made under the following paragraph of this provision constitute the basis for relief under this article unless NASA waives this requirement.

Failing resolution by mutual agreement, the aggrieved party shall document the dispute by notifying the other party in writing of the relevant facts, identify unresolved issues, and specify the clarification or remedy sought. Within five (5) working days after providing written notice to the other party, the aggrieved party may, in writing, request a decision by the dispute resolution official, who will be Mr. Alphonzo Diaz, Deputy Center Director, Goddard Space Flight Center, if necessary. The other party shall submit a written position on the matters in dispute within thirty (30) calendar days after being notified that a decision has been requested. The dispute resolution official shall conduct a review of the matters in dispute and render a decision in writing within thirty (30) calendar days of receipt of such written position. Such resolution is not subject to further administrative review and, to the extent permitted by law, shall be final and binding.

11. Liability and Risk of Loss

With regard to activities undertaken pursuant to this agreement, neither party shall make any claim against the other, employees of the other, the other's related entities (e.g., contractors, subcontractors, etc.), or employees of the other's related entities for any injury to or death of its own employees or employees of its related entities, or for damage to or loss of its own property or that of its related entities, whether such injury, death, damage or loss arises through negligence or otherwise, except in the case of willful misconduct.

To the extent that a risk of damage or loss is expressly allocated to a party in this agreement whether or not arising as a result of the alleged breach of this agreement, shall be limited to direct damages only, and shall not include any loss of revenue or profits or other indirect or consequential damages.

12. Invoicing and Milestone Payments

(a) By submission of the first invoice, the recipient is certifying that it has an established accounting system which complies with generally accepted accounting principles, with the requirements of this agreement, and that appropriate arrangements have been made for receiving, distributing, and accounting for Federal funds received under this agreement.

(b) Payments will be made upon the following milestones:

Date	Payment Milestone	Amount
TBD	Completion of Spacecraft System Definition Review	TBD
TBD	Submittal of Final Briefing	TBD
TBD	Certification that Resource Sharing was met	TBD

(c) Upon submission by the recipient of invoices in accordance with the provision of the agreement and upon certification by NASA of completion of the payable milestone, the contracting officer shall authorize payment.

(d) A payment milestone may be successfully completed in advance of the date appearing in paragraph (b) of this clause. However, payment shall not be made prior to that date without the written consent of the Contracting Officer.

(e) The contractor is not entitled to partial payment for partial completion of a payment milestone.

(f) All preceding payment milestones must be completed before payment can be made for the next payment milestone.

(g) Invoices thereunder shall be submitted in the original and five copies to the Contracting Officer for certification.

13. Additional Funds

Pursuant to this agreement, NASA is providing a fixed amount of funding for activities to be undertaken under the terms of this cooperative agreement. NASA is under no obligation to provide additional funds. Under no circumstances shall the recipient undertake any action which could be construed to imply an increased commitment on the part of NASA under this cooperative agreement.

14. Cost Principles and Accounting Standards

The expenditure of Government funds and the allowability of costs recognized as a resource contribution by the recipient (See clause entitled "Resource Sharing Requirements") shall be governed by the FAR and NASA FAR Supplement cost principles.

15. Responsibilities of the NASA Contracting Officer's Representatives

Designation of the NASA Contracting Officer and Project Manager are listed on the cooperative agreement cover sheet.

The Contracting Officer shall serve as NASA's authorized representative for the administrative elements of all work to be performed under the agreement.

The Project Manager shall have the authority to issue written Technical Advice which suggests redirecting the project work (e.g., by changing the emphasis among different tasks), or pursuing specific lines of inquiry likely to assist in accomplishing the effort. The Project Manager shall have the authority to approve or disapprove those technical reports, plans, and other technical information the recipient is required to submit to NASA for approval. The Project Manager is not authorized to issue and the recipient shall not follow any Technical Advice which constitutes work which is not contemplated under this agreement; which in any manner causes an increase or decrease in the resource sharing or in the time required for performance of the project; which has the effect of changing any of the terms or conditions of the Cooperative Agreement; or which interferes with the recipient's right to perform the project in accordance with the terms and conditions of this Cooperative Agreement.

16. Publications and Reports: Non-Proprietary Research Results

(a) NASA encourages the widest practicable dissemination of research results at all times during the course of the investigation consistent with the other terms of this agreement.

(b) All information, disseminated as a result of the cooperative agreement, shall contain a statement which acknowledges NASA's support and identifies the cooperative agreement by number.

(c) Prior approval by the NASA Project Manager is required only where the recipient requests that the results of the research be published in a NASA scientific or technical publication. Two copies of each draft publication shall accompany the approval request.

(d) Reports shall contain full bibliographic references, abstracts of publications and lists of all other media in which the research was discussed. The recipient shall submit the following technical reports:

TBD

17. Suspension or Revocation

(a) This cooperative agreement may be suspended by NASA or revoked in whole or in part by the recipient or by NASA after consultation with the other party.

(b) Suspension of the cooperative agreement may occur when the recipient has failed to comply with the terms of the cooperative agreement. Upon reasonable notice to the recipient, NASA may temporarily suspend the cooperative agreement and withhold further payments, pending corrective action by the recipient or a decision by NASA to revoke the cooperative agreement.

(c) In the event of revocation, the recipient shall not be entitled to additional funds or payments except as may be required by the recipient to meet commitments which had in the judgment of NASA become firm prior to the effective date of revocation and are otherwise appropriate. In no event, shall these additional funds or payments exceed the amount of the next payable milestone billing amount.

18. Civil Rights (June 1993)

Work on NASA cooperative agreements is subject to the provisions of Title VI of the Civil Rights Act of 1964 (Public Law 88-352; 42 U.S.C. 2000d-1), Title IX of the Education Amendments of 1972 (20 U.S.C. 1680 et seq.), Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.), and the NASA implementing regulations (14 CFR parts 1250, 1251, and 1252).

19. Clean Air-Water Pollution Control Acts

If this cooperative agreement or supplement thereto is in excess of \$100,000, the recipient agrees to notify the Contract Administrator promptly of the receipt, whether prior or subsequent to the recipient's acceptance of this cooperative agreement, of any communication from the Director, Office of Federal Activities, Environmental Protection Agency (EPA), indicating that a facility to be utilized under or in the performance of this cooperative agreement or any subcontract thereunder is under consideration to be listed on the EPA "List of Violating Facilities" published pursuant to 40 CFR 15.20. By acceptance of a cooperative agreement in excess of \$100,000, the recipient (a) stipulates that any facility to be utilized thereunder is not listed on the EPA "List of Violating Facilities" as of the date of acceptance; (b) agrees to comply with all requirements of Section 114 of the Clean Air Act, as amended (42 U.S.C. 1857 et seq. as amended by Public Law 91-604) and Section 308 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq. as amended by Public Law 92-500) relating

to inspection, monitoring, entry, reports and information, and all other requirements specified in the aforementioned Sections, as well as all regulations and guidelines issued thereunder after award of and applicable to the cooperative agreement; and (c) agrees to include the criteria and requirements of this clause in every subcontract hereunder in excess of \$100,000, and to take such action as the Contract Administrator may direct to enforce such criteria and requirements.

20. Debarment and Suspension and Drug-Free Workplace (Feb. 1992)

NASA cooperative agreements are subject to the provisions of 14 CFR part 1265, Government-side Debarment and Suspension (Nonprocurement) and Government-wide requirements for Drug-Free Workplace, unless excepted by 14 CFR Sections 1265.110 or 1265.610. The certifications required by that regulation must accompany extension proposals.

21. Foreign National Employee Investigative Requirements (May 1992)

(a) The recipient shall submit a properly executed Name Check Request (NASA Form 531) and a completed applicant fingerprint card (Federal Bureau of Investigation Card FD-258) for each foreign national employee requiring access to a NASA Installation. These documents shall be submitted to the Installation's Security Office at least 75 days prior to the estimated duty date. The NASA Installation Security Office will request a National Agency Check (NAC) for foreign national employees requiring access to NASA facilities. The NASA Form 531 and fingerprint card may be obtained from the NASA Installation Security Office.

(b) The Installation Security Office will request from NASA Headquarters, International Relations Division (Code IR), approval for each foreign national's access to the Installation prior to providing access to the Installation. If the access approval is obtained from NASA Headquarters prior to completion of the NAC and performance of the cooperative agreement requires a foreign national to be given access immediately, the Project Manager may submit an escort request to the Installation's Chief of Security.

22. Restrictions on Lobbying (Apr. 1990)

This award is subject to the provisions of 14 CFR part 1271 "New Restrictions on Lobbying."

23. Officials Not to Benefit

No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this agreement, or to any benefit arising from it. However, this clause does not apply to this agreement to the extent that this agreement is made with a corporation for the corporation's general benefit.

24. Electronic Funds Transfer Payment Methods

Payments under this cooperative agreement will be made by the Government either by check or electronic funds transfer (through the Treasury Fedline Payment System (FEDLINE) or the Automated Clearing House (ACH), at the option of the Government. After award, but no later than 14 days before an invoice is submitted, the Recipient shall designate a financial institution for receipt of electronic funds transfer payments, and shall submit this designation to the Contracting Officer or other Government official, as directed.

(a) For payment through FEDLINE, the Recipient shall provide the following information:

(1) Name, address, and telegraphic abbreviation of the financial institution receiving payment.

(2) The American Bankers Association 9-digit identifying number for wire transfers of the financing institution receiving payment if the institution has access to the Federal Reserve Communication System.

(3) Payee's account number at the financial institution where funds are to be transferred.

(4) If the financial institution does not have access to the Federal Reserve Communications System, name, address, and telegraphic abbreviation of the correspondent financial institution through which the financial institution receiving payment obtains wire transfer activity. Provide the telegraphic abbreviation and American Bankers Association identifying number for the correspondent institution.

(b) For payment through ACH, the Recipient shall provide the following information:

(1) Routing transit number of the financial institution receiving payment (same as American Bankers Association identifying number used for FEDLINE).

(2) Number of account to which funds are to be deposited.

(3) Type of depositor account ("C" for checking, "S" for savings).

(4) If the Recipient is a new enrollee to the ACH system, a "Payment Information Form," SF 3881, must be completed before payment can be processed.

(c) In the event the Recipient, during the performance of this cooperative agreement, elects to designate a different financial institution for the receipt of any payment made using electronic funds transfer procedures, notification of such change and the required information specified above must be received by the appropriate Government official 30 days prior to the date such change is to become effective.

(d) The documents furnishing the information required in this clause must be dated and contain the signature, title, and telephone number of the Recipient official authorized to provide it, as well as the Recipient's name and contract number.

(e) Failure to properly designate a financial institution or to provide appropriate payee bank account information may delay payments of amounts otherwise properly due.

25. Retention and Examination of Records

Financial records, supporting documents, statistical records, and all other records (or microfilm copies) pertinent to this cooperative agreement shall be retained for a period of 3 years, except that (1) if any litigation, claim, or audit is started before the expiration of the 3-year period, the records shall be retained until all litigation, claims, or audit findings involving the records have been resolved and (2) records for nonexpendable property acquired with cooperative agreement funds shall be retained for 3 years after its final disposition. The retention period starts from the date of the submission of the final invoice. The Administrator of NASA and the Comptroller General of the United States, or any of their duly authorized representatives, shall have access to any pertinent books, documents, papers, and records of the recipient and of subcontractors to make audits, examinations, excerpts, and transcripts. All provisions of this clause shall apply to any subcontractor performing substantive work under this cooperative agreement.